



Accessible Transportation Technologies Research Initiative (ATTRI)

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The Challenge



**Persons with
Disabilities**

- 54.4 million; 20% US population
- Unemployment 63%; Income: \$38,400 (\$61,000)
- Poverty: 24.7% (9.0%)
- Fed expenditures: \$226 B (2002); \$357 B (2008)



**Veterans with
Disabilities**

- Disability claims: 104, 819 (2006) vs. 634,743 (2012)
- 1.4 million deployed; one third report a disability
- Spending: \$0.93 billion (2006) vs. \$5.95 billion (2012)



Seniors/Aging

- Disability rates rise as people get older
- 35 million age 65 + in 2004
- Expected to reach 72 million by 2025






White House Initiatives



- Executive Order 13548 - increasing Federal Employment of individuals with disabilities
 - Establish the Federal Government as a model employer of individuals with disabilities
 - Measures to increase training, hiring and retention
- Lack of adequate transportation
 - Twice as many people with disabilities say it is important to their Daily Living Needs
 - 76% say it is important to their job search
 - 29% consider it a significant problem in accessing jobs
- White House Geo-Access Challenge
 - Explore use of technology and data to increase travel by people with disabilities
 - Recommend Federal research and policy interventions



Transportation Needs for Disability User Groups

Types	Jobs	Education/ Training	Healthcare	Recreational	Housing Aging in Place
 People with Disabilities	●	●	◐	◑	●
 Veterans with Disabilities	●	●	◐	◑	●
 Aging Seniors	◑	◑	●	◐	●

Transportation Need - Level of Significance: Some Significance ◐ Very High Significance ●

- Lack of adequate transportation for people with disabilities is a major barrier for mobility and independent living, access to jobs and education in particular.



Accessible Transportation Technologies Research Initiative (ATTRI)

- A new 5 year joint USDOT R&D effort
 - Co-led by FHWA and FTA with support from ITS JPO and other Federal agencies
- Enhanced mobility quality and choice for travelers with disabilities using Intelligent Transportation Systems (ITS) and other assistive technologies
 - Apply research and innovation to accessible transportation
 - Leverage technologies and innovations from Federal research and development activities
- Accessibility benefits that would extend to all travelers

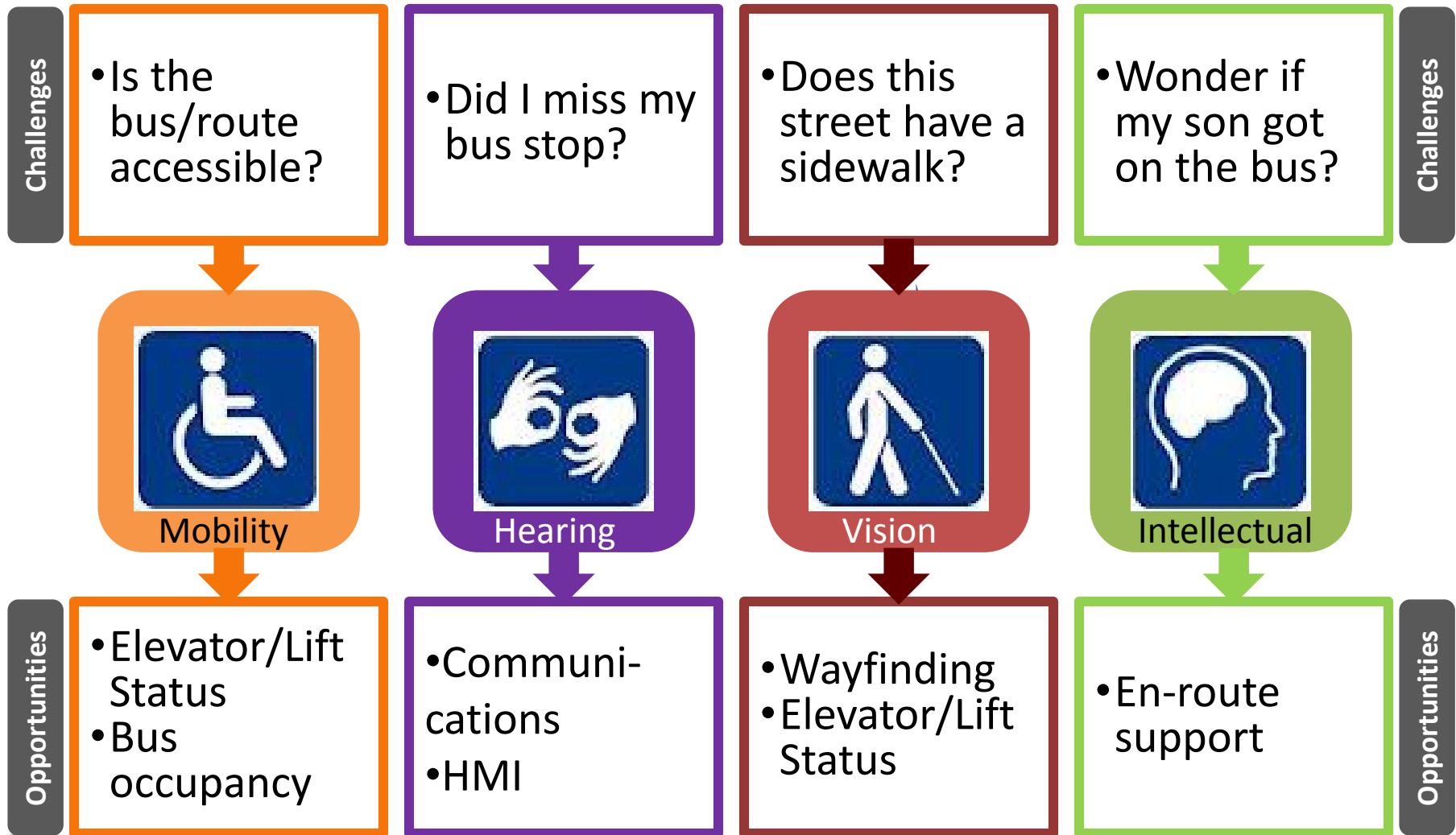


ATTRI Vision

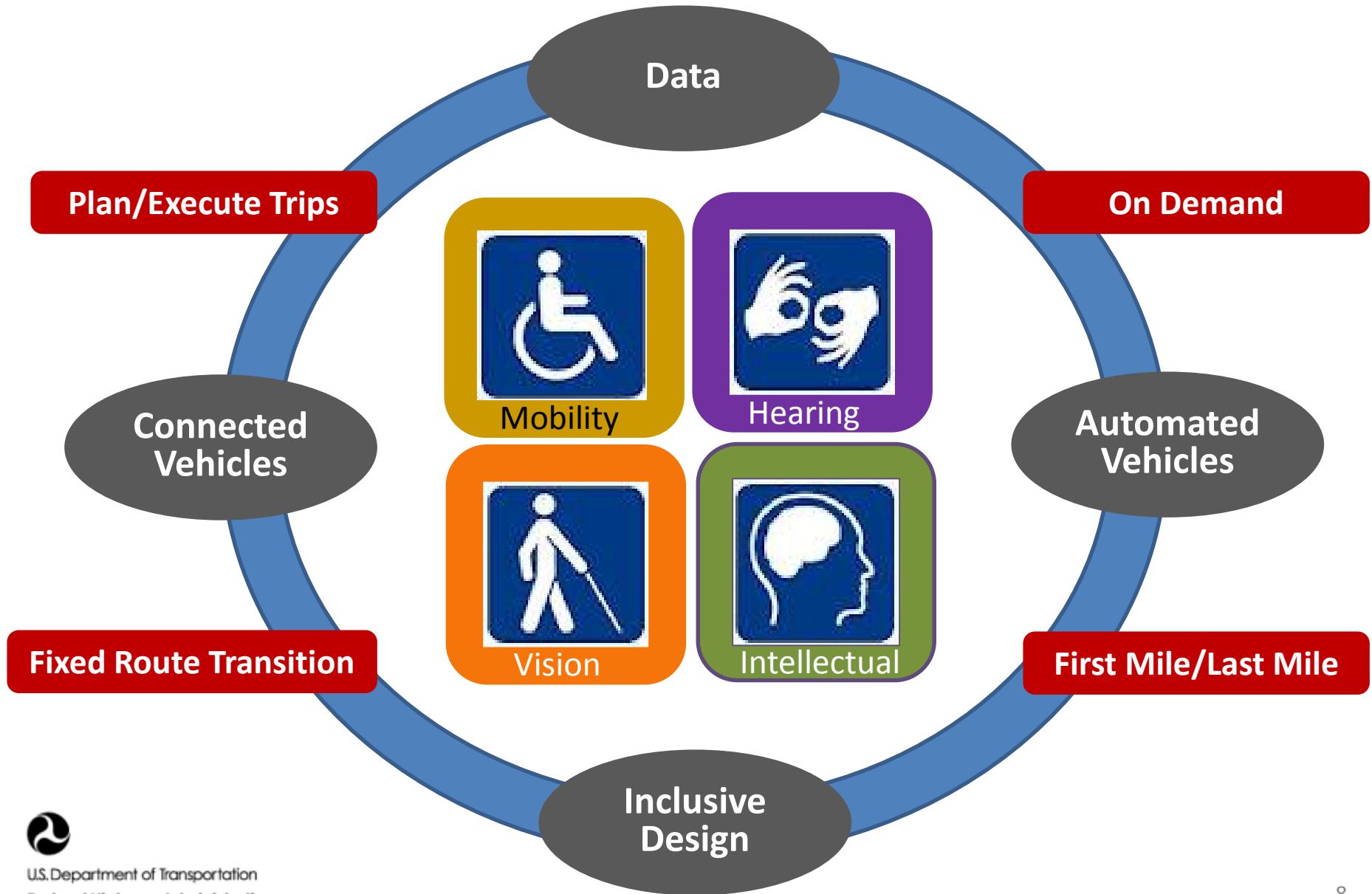
To enhance the mobility of travelers with disabilities by providing the capability to reliably, safely and independently plan and execute their travel. ATTRI identifies, coordinates, develops, and implements new integrated solutions in advancing such capabilities.



Understanding User Needs - Examples



ATTRI Concept



Accessible Transportation Environment Concept



ATTRI Phases

Phase 1

Exploratory Research

Sept. 2013 – Sept. 2014



Phase 2

Development, Testing, and Evaluation

Sept. 2014 – Sept. 2016



Phase 3

Demonstration

Sept. 2016 – Sept. 2018



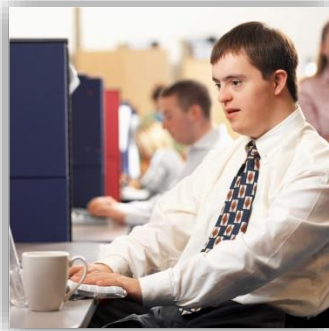
Phase 1 ATTRI Activities

- Stakeholder Engagement and User Needs Assessment
- State of the Practice/Innovation Scan
- Collaboration with other Federal Initiatives
- Strategic Research Plan



Stakeholder Engagement and User Needs Assessment

- Identification and assessment of user needs for:
 - Travelers with disabilities, wounded warriors and older Americans
 - All modalities, fare types and payment systems
 - Trips to school and work, shopping, entertainment venues, medical facilities, and leisure locations
- Identification of specific mobility challenges with near, mid, and long term priorities



U.S. Department of Transportation
Federal Highway Administration

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State of Practice/Innovation Scan; and Assessment of Relevant Research

- State of the practice in accessible transportation and other fields addressing:



- Accessible applications and systems for travelers with disabilities, wounded warriors and older Americans
- Innovative concepts assessment
- Virtual caregivers and coaches
- Personal mobility vehicle (automation needs)
- Accessible travel information and data needs
- Scan on new technology solutions in other domains and industries



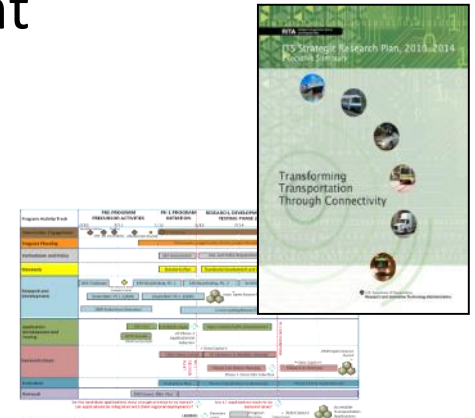
Collaboration

- ATTRI collaborates with other Federal partners:
 - NIDRR
 - ICDR
 - US Army
 - Others



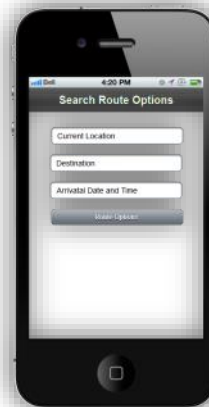
ATTRI Strategic Plan

- Strategic Research Plan is under development
 - Set strategic goals
 - Set Program objectives
 - Develop Action Plan
 - Measure Results
- Uses inputs from:
 - Stakeholders
 - Collaborators
 - User Needs Analysis



Phase 2 ATTRI Activities

- Application Prototype Development Testing and Evaluation
- Institutional and Policy Issues Assessment
- Standards Coordination and Harmonization
- Demonstration Planning



Applications Prototype Development, Testing, and Evaluation

- Develop and test prototype accessible transportation applications through simulated or real test beds
- Identify and address technical and institutional issues and limitations for a successful prototype deployment
- Evaluate prototype system impacts and document key lessons learned to promote deployments, if proven.



Institutional and Policy Issues Assessment

- Examine existing institutional and policy guidelines concerning advanced technologies in support of accessible transportation
- Identify gaps to be bridged to support accessible transportation



Standards Coordination and Harmonization

- Investigate current standards and identify gaps for future coordination and harmonization leading to seamless information exchange between:
 - accessible transportation services
 - existing transportation infrastructure
 - vehicles
 - road users, including travelers with disabilities
- Potential data sources of accessible transportation services:
 - transportation data
 - municipality data
 - points of interest data
 - crowd sourced data
 - disability data



Demonstration Planning

- ATTRI demonstrations
- Scoping and planning
- Interagency dialogue and opportunity for joint demonstrations



Phase 3 ATTRI - Demonstrations

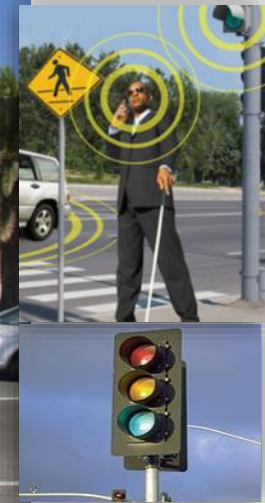
Technology/Data



Vehicles



Infrastructure



Travelers



Next Steps...

- Stakeholder Engagement and User Needs Identification
 - Workshops
 - Surveys
 - Interviews/listening sessions
- Contact:

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